

SEVERN TRENT LABORATORIES ANALYTICAL REPORT

JOB NUMBER: 220650

Prepared For:

SCS Engineers, Inc.
10401 Holmes Road
Suite 400
Kansas City, MO 64131

Project: Hardesty Federal Center Project

Attention: David Brewer

Date: 12/12/2003

Signature

Name: Eric A. Lang

Title: Project Manager

E-Mail: elang@stl-inc.com

Date

STL Chicago
2417 Bond Street
University Park, IL 60466

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This Report Contains (____) Pages

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SAMPLE INFORMATION
Date: 12/12/2003

Job Number.: 220650
Customer...: SCS Engineers, Inc.
Attn.....: David Brewer

Project Number.....: 20002955
Customer Project ID....: HARDESTY FEDERAL CENTER
Project Description....: Hardesty Federal Center Project

[illegible]

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LABORATORY TEST RESULTS												
Job Number: 220650			Date:12/12/2003									
CUSTOMER: SCS Engineers, Inc.			PROJECT: HARDESTY FEDERAL CEN		ATTN: David Brewer							
Customer Sample ID: B3 BASEMENT FLR. SWITCH AREA Date Sampled.....: 09/17/2003 Time Sampled.....: 09:30 Sample Matrix.....: Solid			Laboratory Sample ID: 220650-1 Date Received.....: 09/18/2003 Time Received.....: 14:30									
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	94.5			0.10	0.10	1	%	96415		09/22/03 1145	cxp
	% Moisture, Solid	5.5			0.10	0.10	1	%	96415		09/22/03 1145	cxp
8082	PCB Analysis											
	Aroclor 1016, Solid*	17	U		3.0	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1221, Solid*	17	U		7.0	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1232, Solid*	17	U		3.1	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1242, Solid*	17	U		6.5	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1248, Solid*	17	U		2.4	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1254, Solid*	49			2.8	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk
	Aroclor 1260, Solid*	17	U		2.6	17	1.00000	ug/Kg	96767		09/25/03 0012	mgjk

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS												
Job Number: 220650			Date:12/12/2003									
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CEN		ATTN: David Brewer								
Customer Sample ID: B3 BASEMENT FLR. CONCRETE AREA Date Sampled.....: 09/17/2003 Time Sampled.....: 10:00 Sample Matrix.....: Solid Laboratory Sample ID: 220650-2 Date Received.....: 09/18/2003 Time Received.....: 14:30												
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	94.0			0.10	0.10	1	%	96415		09/22/03 1145	cxp
	% Moisture, Solid	6.0			0.10	0.10	1	%	96415		09/22/03 1145	cxp
8082	PCB Analysis											
	Aroclor 1016, Solid*	17	U		3.0	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1221, Solid*	17	U		6.9	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1232, Solid*	17	U		3.1	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1242, Solid*	17	U		6.5	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1248, Solid*	17	U		2.4	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1254, Solid*	81			2.8	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk
	Aroclor 1260, Solid*	17	U		2.6	17	1.00000	ug/Kg	96767		09/25/03 0045	mgjk

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS												
Job Number: 220650		Date:12/12/2003										
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CEN		ATTN: David Brewer								
Customer Sample ID: B11 2ND FLR. ELECT. SWITCH AREA Date Sampled.....: 09/17/2003 Time Sampled.....: 11:30 Sample Matrix.....: Solid Laboratory Sample ID: 220650-3 Date Received.....: 09/18/2003 Time Received.....: 14:30												
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	99.1			0.10	0.10	1	%	96415		09/22/03 1145	cxp
	% Moisture, Solid	0.90			0.10	0.10	1	%	96415		09/22/03 1145	cxp
8082	PCB Analysis											
	Aroclor 1016, Solid*	17	U		2.9	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1221, Solid*	17	U		6.7	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1232, Solid*	17	U		3.0	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1242, Solid*	17	U		6.3	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1248, Solid*	17	U		2.3	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1254, Solid*	17	U		2.7	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk
	Aroclor 1260, Solid*	17	U		2.5	17	1.00000	ug/Kg	96767		09/25/03 0118	mgjk

* In Description = Dry Wgt.

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Job Number: 220650				LABORATORY TEST RESULTS				Date:12/12/2003				
CUSTOMER: SCS Engineers, Inc.				PROJECT: HARDESTY FEDERAL CEN				ATTN: David Brewer				
Customer Sample ID: B3 ELECT. VAULT FLOOR Date Sampled.....: 09/17/2003 Time Sampled.....: 13:00 Sample Matrix.....: Wipe				Laboratory Sample ID: 220650-4 Date Received.....: 09/18/2003 Time Received.....: 14:30								
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1221, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1232, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1242, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1248, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1254, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk
	Aroclor 1260, Wipe	1.2			0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 0947	mgjk

* In Description = Dry Wgt.

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Job Number: 220650				LABORATORY TEST RESULTS				Date:12/12/2003				
CUSTOMER: SCS Engineers, Inc.				PROJECT: HARDESTY FEDERAL CEN				ATTN: David Brewer				
Customer Sample ID: B9 FLOOR BELOW PULL BOT Date Sampled.....: 09/17/2003 Time Sampled.....: 13:30 Sample Matrix.....: Wipe				Laboratory Sample ID: 220650-5 Date Received.....: 09/18/2003 Time Received.....: 14:30								
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1221, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1232, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1242, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1248, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1254, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk
	Aroclor 1260, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1019	mgjk

* In Description = Dry Wgt.

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LABORATORY TEST RESULTS												
Job Number: 220650			Date:12/12/2003									
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CEN		ATTN: David Brewer								
Customer Sample ID: B11 1ST FLR. HV CABLE AREA Date Sampled.....: 09/17/2003 Time Sampled.....: 14:00 Sample Matrix.....: Solid Laboratory Sample ID: 220650-6 Date Received.....: 09/18/2003 Time Received.....: 14:30												
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
Method	% Solids Determination											
	% Solids, Solid	99.2			0.10	0.10	1	%	96415		09/22/03 1145	cxp
	% Moisture, Solid	0.80			0.10	0.10	1	%	96415		09/22/03 1145	cxp
8082	PCB Analysis											
	Aroclor 1016, Solid*	17	U		2.9	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1221, Solid*	17	U		6.6	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1232, Solid*	17	U		3.0	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1242, Solid*	17	U		6.2	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1248, Solid*	17	U		2.3	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1254, Solid*	17	U		2.7	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk
	Aroclor 1260, Solid*	17	U		2.5	17	1.00000	ug/Kg	96767		09/25/03 0150	mgjk

* In Description = Dry Wgt.

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Job Number: 220650				LABORATORY TEST RESULTS				Date:12/12/2003				
CUSTOMER: SCS Engineers, Inc.				PROJECT: HARDESTY FEDERAL CEN				ATTN: David Brewer				
Customer Sample ID: B11 2ND FLR. BALLAST SPILL Date Sampled.....: 09/17/2003 Time Sampled.....: 15:00 Sample Matrix.....: Wipe				Laboratory Sample ID: 220650-7 Date Received.....: 09/18/2003 Time Received.....: 14:30								
TEST METHOD	PARAMETER/TEST DESCRIPTION	SAMPLE RESULT	Q	FLAGS	MDL	RL	DILUTION	UNITS	BATCH	DT	DATE/TIME	TECH
8082	PCB Analysis											
	Aroclor 1016, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1221, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1232, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1242, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1248, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1254, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk
	Aroclor 1260, Wipe	0.50	U		0.50	0.50	1.00000	ug/Wipe	96767		09/25/03 1052	mgjk

* In Description = Dry Wgt.

L A B O R A T O R Y C H R O N I C L E

Job Number: 220650

Date: 12/12/2003

CUSTOMER: SCS Engineers, Inc.

PROJECT: HARDESTY FEDERAL CEN

ATTN: David Brewer

Lab ID: 220650-1	Client ID: B3 BASEMENT FLR. SWITCH AREA	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
Method	% Solids Determination	1	96415		09/22/2003 1145
3550B	Extraction Ultrasonic (PCBs)	1	96369		09/21/2003 1600
8082	PCB Analysis	1	96767	96369	09/25/2003 0012 1.00000
Lab ID: 220650-2	Client ID: B3 BASEMENT FLR. CONCRETE AREA	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
Method	% Solids Determination	1	96415		09/22/2003 1145
3550B	Extraction Ultrasonic (PCBs)	1	96369		09/21/2003 1600
8082	PCB Analysis	1	96767	96369	09/25/2003 0045 1.00000
Lab ID: 220650-3	Client ID: B11 2ND FLR. ELECT. SWITCH ARE	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
Method	% Solids Determination	1	96415		09/22/2003 1145
3550B	Extraction Ultrasonic (PCBs)	1	96369		09/21/2003 1600
8082	PCB Analysis	1	96767	96369	09/25/2003 0118 1.00000
Lab ID: 220650-4	Client ID: B3 ELECT. VAULT FLOOR	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
3550B	Extraction Ultrasonic (PCBs)	1	96356		09/20/2003 0900
8082	PCB Analysis	1	96767	96356	09/25/2003 0947 1.00000
Lab ID: 220650-5	Client ID: B9 FLOOR BELOW PULL BOT	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
3550B	Extraction Ultrasonic (PCBs)	1	96356		09/20/2003 0900
8082	PCB Analysis	1	96767	96356	09/25/2003 1019 1.00000
Lab ID: 220650-6	Client ID: B11 1ST FLR. HV CABLE AREA	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
Method	% Solids Determination	1	96415		09/22/2003 1145
3550B	Extraction Ultrasonic (PCBs)	1	96369		09/21/2003 1600
8082	PCB Analysis	1	96767	96369	09/25/2003 0150 1.00000
Lab ID: 220650-7	Client ID: B11 2ND FLR. BALLAST SPILL	Date Recvd: 09/18/2003	Sample Date: 09/17/2003		
METHOD	DESCRIPTION	RUN#	BATCH#	PREP BT # (S)	DATE/TIME ANALYZED
3550B	Extraction Ultrasonic (PCBs)	1	96356		09/20/2003 0900
8082	PCB Analysis	1	96767	96356	09/25/2003 1052 1.00000

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SURROGATE RECOVERIES REPORT

Job Number.: 220650

Report Date.: 12/12/2003

CUSTOMER: SCS Engineers, Inc.

PROJECT: HARDESTY FEDERAL CENTER

ATTN: David Brewer

Method.....: PCB Analysis

Test Matrix...: Wipe

Prep Batch...: 96356

Method Code...: 8082

Batch(s).....: 96767

Lab ID	DT	Sample ID	Date	DCB	TCX						
LCD			09/25/2003	93	89						
LCS			09/25/2003	88	87						
MB			09/25/2003	90	95						
220650- 4		B3 ELECT. VAULT FLOOR	09/25/2003	55	96						
220650- 5		B9 FLOOR BELOW PULL BOT	09/25/2003	53	97						
220650- 7		B11 2ND FLR. BALLAST SPILL	09/25/2003	55	99						
Test	Test Description		Limits								
DCB	Decachlorobiphenyl (surr)		41 - 125								
TCX	Tetrachloro-m-xylene (surr)		56 - 115								

Method.....: PCB Analysis

Test Matrix...: Solid

Prep Batch...: 96369

Method Code...: 8082

Batch(s).....: 96767

Lab ID	DT	Sample ID	Date	DCB	TCX						
LCD			09/24/2003	92	99						
LCS			09/24/2003	87	89						
MB			09/24/2003	86	93						
220650- 1		B3 BASEMENT FLR. SWITCH AREA	09/25/2003	38	91						
220650- 2		B3 BASEMENT FLR. CONCRETE AREA	09/25/2003	46	94						
220650- 3		B11 2ND FLR. ELECT. SWITCH AREA	09/25/2003	44	81						
220650- 6		B11 1ST FLR. HV CABLE AREA	09/25/2003	70	90						
Test	Test Description		Limits								
DCB	Decachlorobiphenyl (surr)		24 - 129								
TCX	Tetrachloro-m-xylene (surr)		40 - 116								

Q U A L I T Y C O N T R O L R E S U L T S					
Job Number.: 220650			Report Date.: 12/12/2003		
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CENTER		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: 8082	Equipment Code....: INST0708	Analyst...: mgk
Method Description.: PCB Analysis	Batch.....: 96767	

LCD	Laboratory Control Sample Duplicate	O03IWLPCBA	96356 -003		09/25/2003 0914
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Wipe	ug/Wipe	4.701700	4.669700	5.001000	0.500000 U 94	1	%	67-103	
							R	30	
Aroclor 1260, Wipe	ug/Wipe	4.826200	4.674600	5.010000	0.500000 U 96	3	%	65-109	
							R	30	

Q U A L I T Y C O N T R O L R E S U L T S					
Job Number.: 220650			Report Date.: 12/12/2003		
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CENTER		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time

Test Method.....: 8082	Equipment Code....: INST0708	Analyst...: mgk
Method Description.: PCB Analysis	Batch.....: 96767	

LCS	Laboratory Control Sample	O03IWLPCBA	96356 -002		09/25/2003 0841
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Wipe	ug/Wipe	4.669700		5.001000	0.500000	U 93	%	67-103	
Aroclor 1260, Wipe	ug/Wipe	4.674600		5.010000	0.500000	U 93	%	65-109	

Job Number.: 220650		Q U A L I T Y C O N T R O L R E S U L T S		Report Date.: 12/12/2003	
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CENTER		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
Test Method.....: 8082		Equipment Code....: INST0708		Analyst....: mgk	
Method Description.: PCB Analysis		Batch.....: 96767			

MB	Method Blank		96369 -001		09/24/2003 2234
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Solid	ug/Kg	16.700	U						
Aroclor 1221, Solid	ug/Kg	16.700	U						
Aroclor 1232, Solid	ug/Kg	16.700	U						
Aroclor 1242, Solid	ug/Kg	16.700	U						
Aroclor 1248, Solid	ug/Kg	16.700	U						
Aroclor 1254, Solid	ug/Kg	16.700	U						
Aroclor 1260, Solid	ug/Kg	16.700	U						

Job Number.: 220650		Q U A L I T Y C O N T R O L R E S U L T S		Report Date.: 12/12/2003	
CUSTOMER: SCS Engineers, Inc.		PROJECT: HARDESTY FEDERAL CENTER		ATTN:	
QC Type	Description	Reag. Code	Lab ID	Dilution Factor	Date Time
Test Method.....: 8082		Equipment Code....: INST0708		Analyst....: mgk	
Method Description.: PCB Analysis		Batch.....: 96767			

MB	Method Blank		96356 -001		09/25/2003 0809
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Parameter/Test Description	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc.	*	Limits	F
Aroclor 1016, Wipe	ug/Wipe	0.500000	U						
Aroclor 1221, Wipe	ug/Wipe	0.500000	U						
Aroclor 1232, Wipe	ug/Wipe	0.500000	U						
Aroclor 1242, Wipe	ug/Wipe	0.500000	U						
Aroclor 1248, Wipe	ug/Wipe	0.500000	U						
Aroclor 1254, Wipe	ug/Wipe	0.500000	U						
Aroclor 1260, Wipe	ug/Wipe	0.500000	U						

Job Number.: 220650	Q U A L I T Y C O N T R O L R E S U L T S	Report Date.: 12/12/2003
CUSTOMER: SCS Engineers, Inc.	PROJECT: HARDESTY FEDERAL CENTER	ATTN: David Brewer

Test Method.....: Method	Batch.....: 96415	Analyst...: crp
Method Description.: % Solids Determination	Equipment Code....:	Test Code.: %SOLID
Parameter.....: % Solids		

QC	Lab ID	Reagent	Units	QC Result	QC Result	True Value	Orig. Value	QC Calc. F	*	Limits	Date	Time
MB	96415-001		%	0.1000					H		09/22/2003	1145

QUALITY ASSURANCE METHODS

REFERENCES AND NOTES

Report Date: 12/12/2003

REPORT COMMENTS

- 1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.
- 2) Soil, sediment and sludge sample results are reported on a "dry weight" basis except when analyzed for landfill disposal or incineration parameters. All other solid matrix samples are reported on an "as received" basis unless noted differently.
- 3) Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.
- 4) The test results for the noted analytical method(s) meet the requirements of NELAC. Lab Cert. ID# 100201
- 5) According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH Field) they were not analyzed immediately, but as soon as possible on laboratory receipt.

Glossary of flags, qualifiers and abbreviations (any number of which may appear in the report)

Inorganic Qualifiers (Q-Column)

- U Analyte was not detected at or above the stated limit.
- < Not detected at or above the reporting limit.
- J Result is less than the RL, but greater than or equal to the method detection limit.
- B Result is less than the CRDL/RL, but greater than or equal to the IDL/MDL.
- S Result was determined by the Method of Standard Additions.
- F AFCEE: Result is less than the RL, but greater than or equal to the method detection limit.

Inorganic Flags (Flag Column)

- ^ ICV,CCV,ICB,CCB,ISA,ISB,CRI,CRA,MRL: Instrument related QC exceed the upper or lower control limits.
- * LCS, LCD, MD: Batch QC exceeds the upper or lower control limits.
- + MSA correlation coefficient is less than 0.995.
- 4 MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
- E SD: Serial dilution exceeds the control limits.
- H MB, EB1, EB2, EB3: Batch QC is greater than reporting limit or had a negative instrument reading lower than the absolute value of the reporting limit.
- N MS, MSD: Spike recovery exceeds the upper or lower control limits.
- W AS(GFAA) Post-digestion spike was outside 85-115% control limits.

Organic Qualifiers (Q - Column)

- U Analyte was not detected at or above the stated limit.
- ND Compound not detected.
- J Result is an estimated value below the reporting limit or a tentatively identified compound (TIC).
- Q Result was qualitatively confirmed, but not quantified.
- C Pesticide identification was confirmed by GC/MS.
- Y The chromatographic response resembles a typical fuel pattern.
- Z The chromatographic response does not resemble a typical fuel pattern.
- E Result exceeded calibration range, secondary dilution required.
- F AFCEE:Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)

Organic Flags (Flags Column)

- B MB: Batch QC is greater than reporting limit.
- * LCS, LCD, ELC, ELD, CV, MS, MSD, Surrogate: Batch QC exceeds the upper or lower control limits.
- ^ EB1, EB2, EB3, MLE: Batch QC is greater than reporting Limit
- A Concentration exceeds the instrument calibration range
- a Concentration is below the method Reporting Limit (RL)
- B Compound was found in the blank and sample.
- D Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.
- H Alternate peak selection upon analytical review
- I Indicates the presence of an interference, recovery is not calculated.
- M Manually integrated compound.
- P The lower of the two values is reported when the % difference between the results of two GC columns is

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greater than 25%.

Abbreviations

AS	Post Digestion Spike (GFAA Samples - See Note 1 below)
Batch	Designation given to identify a specific extraction, digestion, preparation set, or analysis set
CAP	Capillary Column CCB Continuing Calibration Blank
CCV	Continuing Calibration Verification
CF	Confirmation analysis of original
C1	Confirmation analysis of A1 or D1
C2	Confirmation analysis of A2 or D2
C3	Confirmation analysis of A3 or D3
CRA	Low Level Standard Check - GFAA; Mercury
CRI	Low Level Standard Check - ICP
CV	Calibration Verification Standard
Dil Fac	Dilution Factor - Secondary dilution analysis
D1	Dilution 1
D2	Dilution 2
D3	Dilution 3
DLFac	Detection Limit Factor
DSH	Distilled Standard - High Level
DSL	Distilled Standard - Low Level
DSM	Distilled Standard - Medium Level
EB1	Extraction Blank 1
EB2	Extraction Blank 2
EB3	DI Blank
ELC	Method Extracted LCS
ELD	Method Extracted LCD
ICAL	Initial calibration
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ISA	Interference Check Sample A - ICAP
ISB	Interference Check Sample B - ICAP
Job No.	The first six digits of the sample ID which refers to a specific client, project and sample group Lab ID An 8 number unique laboratory identification
LCD	Laboratory Control Standard Duplicate
LCS	Laboratory Control Standard with reagent grade water or a matrix free from the analyte of interest
MB	Method Blank or (PB) Preparation Blank
MD	Method Duplicate
MDL	Method Detection Limit
MLE	Medium Level Extraction Blank
MRL	Method Reporting Limit Standard
MSA	Method of Standard Additions
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not Detected
PREPF	Preparation factor used by the Laboratory's Information Management System (LIMS)
PDS	Post Digestion Spike (ICAP)
RA	Re-analysis of original
A1	Re-analysis of D1
A2	Re-analysis of D2
A3	Re-analysis of D3
RD	Re-extraction of dilution
RE	Re-extraction of original
RC	Re-extraction Confirmation
RL	Reporting Limit
RPD	Relative Percent Difference of duplicate (unrounded) analyses
RRF	Relative Response Factor
RT	Retention Time

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RTW	Retention Time Window Sample ID A 9 digit number unique for each sample, the first six digits are referred as the job number
SCB	Seeded Control Blank
SD	Serial Dilution (Calculated when sample concentration exceeds 50 times the MDL)
UCB	Unseeded Control Blank
SSV	Second Source Verification Standard
SLCS	Solid Laboratory Control Standard(LCS)
PHC	pH Calibration Check LCSP pH Laboratory Control Sample
LCDP	pH Laboratory Control Sample Duplicate
MDPH	pH Sample Duplicate
MDFP	Flashpoint Sample Duplicate
LCFP	Flashpoint LCS
G1	Gelex Check Standard Range 0-1
G2	Gelex Check Standard Range 1-10
G3	Gelex Check Standard Range 10-100
G4	Gelex Check Standard Range 100-1000

Note 1: The Post Spike Designation on Batch QC for GFAA is designated with an "S" added to the current abbreviation used. EX. LCS S=LCS Post Spike (GFAA); MSS=MS Post Spike (GFAA)

Note 2: The MD calculates an absolute difference (A) when the sample concentration is less than 5 times the reporting limit. The control limit is represented as +/- the RL.